

IN THE CLAIMS:

1. (Currently Amended) A thin-film magnetic head having an MR head portion containing magnetoresistive elements, wherein the following layers are formed on at least the surface of said MR head portion facing a recording medium:

(A) a lower layer ~~composed of~~ comprising a thin film having a composition represented by the formula selected from the group consisting of:

formula (i): $\text{SiC}_x\text{H}_y\text{O}_z\text{N}_w\text{F}_t\text{B}_u\text{P}_v$

where $X = 0.5 - 26$, $Y = 0.5 - 13$, $Z = 0 - 6$, $W = 0 - 6$, $T = 0 - 6$, $U = 0 - 1$ and $V = 0 - 1$, in terms of atomic ratio, and

formula (ii): $\text{SiH}_y\text{O}_z\text{N}_w\text{F}_t\text{B}_u\text{P}_v$

where $Y = 0.0001 - 0.7$, $Z = 0 - 6$, $W = 0 - 6$, $T = 0 - 6$, $U = 0 - 1$ and $V = 0 - 1$, in terms of atomic ratio; and

(B) an upper layer ~~composed of~~ comprising a diamond-like thin film having a composition represented by the following formula: $\text{CH}_a\text{O}_b\text{N}_c\text{F}_d\text{B}_e\text{P}_f$

where $a = 0 - 0.7$, $b = 0 - 1$, $c = 0 - 1$, $d = 0 - 1$, $e = 0 - 1$ and $f = 0 - 1$, in terms of atomic ratio.

2. (Original) The magnetic head according to Claim 1, wherein the overall thickness of said lower layer and said upper layer is 40 Å or less.

3. (Currently Amended) The magnetic head according to Claim 1 ~~or 2~~, wherein said lower layer and said upper layer are formed by vapor deposition method.

4. (Currently Amended) The magnetic head according to Claim 1 ~~or 2~~, wherein said lower layer has a thickness of 20 Å or less, and said upper layer has a thickness of 20 Å or less.

5. (Currently Amended) A method for producing a thin-film magnetic head, ~~wherein comprising conducting~~ vapor deposition ~~is conducted~~ on at least ~~the~~ a surface of said thin-film magnetic head facing a recording medium, ~~in such a manner that~~ to form the following layers ~~are formed~~ thereon:

(A) a lower layer having a composition represented by the formula selected from the group consisting of:

formula (i): $\text{SiC}_X\text{H}_Y\text{O}_Z\text{N}_W\text{F}_T\text{B}_U\text{P}_V$

where $X = 0.5 - 26$, $Y = 0.5 - 13$, $Z = 0 - 6$, $W = 0 - 6$, $T = 0 - 6$, $U = 0 - 1$ and $V = 0 - 1$, in terms of atomic ratio, and

formula (ii): $\text{SiH}_Y\text{O}_Z\text{N}_W\text{F}_T\text{B}_U\text{P}_V$

where $Y = 0.0001 - 0.7$, $Z = 0 - 6$, $W = 0 - 6$, $T = 0 - 6$, $U = 0 - 1$ and $V = 0 - 1$, in terms of atomic ratio; and

(B) an upper layer ~~composed of~~ comprising a diamond-like thin film having a composition represented by the following formula: $\text{CH}_a\text{O}_b\text{N}_c\text{F}_d\text{B}_e\text{P}_f$

where $a = 0 - 0.7$, $b = 0 - 1$, $c = 0 - 1$, $d = 0 - 1$, $e = 0 - 1$ and $f = 0 - 1$, in terms of atomic ratio.

6. (Currently Amended) The method according to Claim 5, ~~wherein comprising~~ conducting deposition ~~is conducted~~ in such a manner that the thickness of said lower layer becomes 20 Å or less, and the thickness of said upper layer becomes Å or less.

7. (Currently Amended) The method according to Claim 5, ~~wherein comprising~~ conducting vapor deposition ~~is conducted~~ by applying a negative bias voltage to the thin-film magnetic head.

8. (Currently Amended) The method according to Claim 7, ~~wherein~~ comprising conducting said bias voltage ~~is applied~~ by self-bias generated by an applied DC source or an applied radiofrequency power.

9. (Original) A magnetic disk device having at least one slider equipped with the thin-film magnetic head according to Claim 1.